

ESH-ERG-920689



March 17, 1993

Mr. J. D. Johnston, Chief Federal Facilities Branch U. S. Environmental Protection Agency Region IV 345 Courtland Street, N. E. Atlanta, GA 30365

Mr. H. W. Truesdale, P. E. Chief Bureau of Solid and Hazardous Waste South Carolina Department of Health and Environmental Control 2600 Bull Street Columbia, SC 29201

Dear Sirs:

ABANDONED DRUMS - CSX RAILROAD RIGHT OF WAY REMOVAL SITE **EVALUATION (U)**

Enclosed is the Abandoned Drums - CSX Railroad Right Of Way Removal Site Evaluation as required by Section X (Site Evaluations) of the Federal Facility Agreement (FFA). For the newly discovered release, a removal SE has been performed in accordance with Section 300.410 of the National Contingency Plan (NCP). The enclosed report documents the removal SE findings. Based on the findings no further action is recommended. A written response to the submittal is requested of EPA Region IV and SCDHEC in accordance with the referenced section of the FFA.

If you have a questions, please contact C. A. Amacher at (803) 725-8710.

Yours very truly,

J. W. Cook, Manager

Environmental Restoration and Geological Oversight

Environmental Protection Department

Enclosure

CC: w/Enclosure

> A. B. Gould, Jr., 703-41A (Concur) A. R. McClain, 703-A (Concur)

L. C. Goidell, 703-A

M. C. Reece, SCDHEC-Aiken

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REMOVAL SITE EVALUATION REPORT

1.0 INTRODUCTION

For newly identified spills or releases of hazardous substances that can not be cleaned up in a timely manner under site spill response procedures, a removal site evaluation (SE) will be performed. The removal SE will be performed in accordance with Section 300.410 of the National Contingency Plan (NCP) and the Federal Facility Agreement (FFA), Section X, (Site Evaluations). The following Site Evaluation Report is on the nine (9) drums discovered along the Barnwell Spur of the CSX Railroad right of way with in the bounds of SRS, March 27, 1992.

2.0 UNIT DESCRIPTION, OPERATIONAL HISTORY, AND WASTE CHARACTERISTICS

2.1 Location

The drums were discovered along the Barnwell Spur of the CSX Railroad right of way at Donora Station. Donora Station is the switch station used to transfer trains from CSX to the Savannah River Site. The site is located in Barnwell county, east of gate 20 in a remote area of SRS. The site is within the Lower Three Runs flood plain, approximately 175 feet from Lower Three Runs. The approximate site coordinates are N28800, E81000. The latitude and longitude are 33.2215 and 81.5096. See Appendix A for maps.

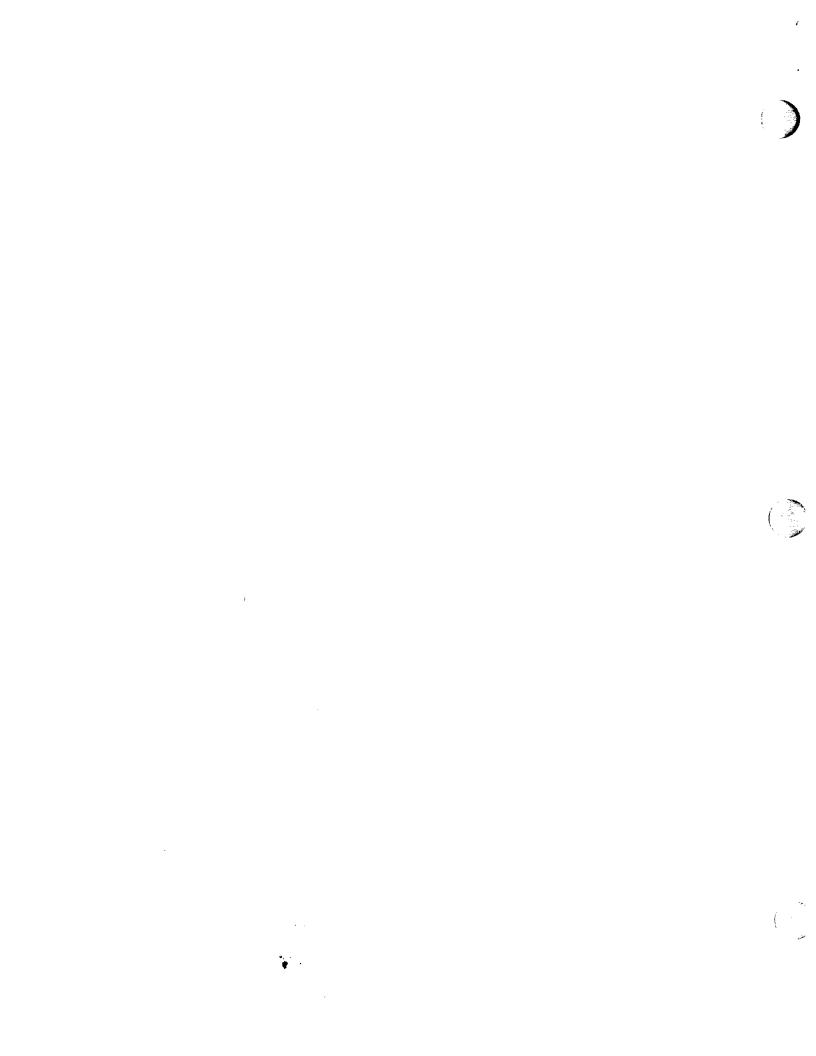
2.2 Site Description

On March 27, 1992, nine drums labeled kerosene were discovered along the Barnwell Spur of the CSX Railroad right of way within the bounds of SRS. The drums along with numerous empty beer cans and bottles were found at the bottom of the railroad embankment in close proximity to the switch station used to transfer trains from the CSX line to the Savannah River Site. The switch station was manned until the mid 1980's. The kerosene is believed to have been used for the heating of the operator's shed. It appears the drums were disposed of over the embankment and abandoned in the woods. Two (2) of the drums appeared to be partially full, and a few of the drums were labeled "kerosene" and "Atlantic Coastline" (the previous owner of the railroad). The embankment area in which the drums where found is heavily littered with empty beer cans. See Appendix A for photographs.

2.3 Operational History and Waste Characteristics

Upon review of kerosene's MSDS (flash point 100 degrees F), it was determined that waste kerosene may be hazardous due to ignitability. The NRC was notified of a possible release of a reportable quantity (RQ). SCDHEC-Aiken and Columbia and EPA-IV were also notified of a potential release to the environment.

PROKEED -



The site was visited the afternoon of March 27, 1992, by B. Benson, SCDHEC, W. Whitaker, DOE-ED, and C. Amacher, WSRC-EPD. It was determined that nine drums of material labeled kerosene had been found, collectively containing approximately 30 gallons. There was a faint odor of kerosene (or petroleum) in the air, and no visible release to the environment. The suspect oil sheen was determined by SCDHEC to be "swamp sheen" and not due to a release from the drums. The nine drums were over packed. The drums were removed from the site Monday, March 30, 1992, and were managed in a RCRA staging area (712-G) until the contents could be determined.

3.0 SAMPLING/MONITORING DATA HISTORY

3.1 Drums Sample Analysis Data

Samples were collected from the nine drums. The drums containing multiple layers of substance had a sample collected from each layer. The Savannah River Technical Center (SRTC), formally Savannah River Laboratory (SRL), performed the analysis for radioactivity, flash point and Gas Chromatography/Mass Spectrometry (a finger print analysis).

SRTC conducted a screening analysis and determined an aqueous and organic phase. The organic phase was determined to be kerosene and the aqueous phase was determined to be water with traces of kerosene. All of the samples flash points were determined to be in excess of 140 degrees F. The samples were also determined not to be radioactively contaminated. The material is not characteristically ignitable therefore, not a hazardous waste. In accordance with Section 302.4 of the National Contingency Plan (NCP), kerosene is not a hazardous substance, and was only considered a hazardous substance due to it potential ignitability. The drums sample analysis report is included in Appendix B.

3.2 Soil Sampling Data

The drums were essentially grouped in two locations. Two (2) composite soil samples of the top six (6) inches from the depressions left by the drums in the soil were collected each of the two locations. The samples were analyzed for Total Petroleum Hydrocarbons (TPH), and BTX constituents (Benzene, Toluene, Ethyl Benzene and Xylene). Low concentrations of TPH were detected at the site, however the concentrations were below any action levels. The BTEX constituents were below detection limits. The soil sample analysis report is included in Appendix C.

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4.0 GROUND WATER PATHWAY

4.1 Hydrologic Setting

The site is within the Lower Three Runs flood plain, approximately 175 feet from Lower Three Runs. The seven (7) drums not on the embankment were actually within the flood plain area.

5.0 SURFACE WATER PATHWAY

Surface drainage is to the southeast to the Lower Three Runs. It appears that there has been no release of a hazardous substance to the environment; therefore, there are no exposure targets.

6.0 SOIL EXPOSURE AND AIR PATHWAYS

Based on the soil sampling taken there has been no release of hazardous substances to the environment, therefore there are no exposure targets.

7.0 SUMMARY AND CONCLUSIONS

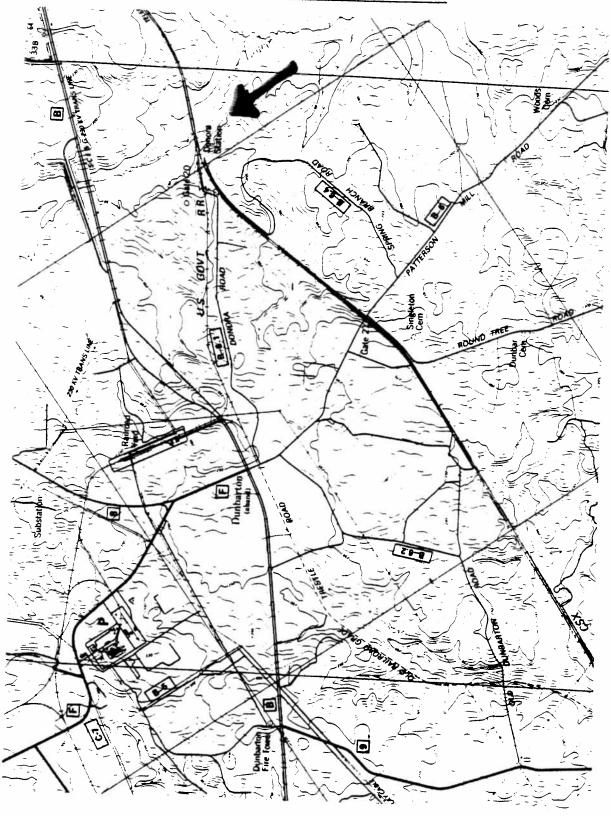
In accordance with 300.410(e)(3) of the NCP, the release involves neither a hazardous substance, nor pollutant or contaminant that may present an imminent and substantial danger to public health or welfare. No further action is recommended and the release site should be eliminated from further consideration as it poses no threat to human health and the environment.

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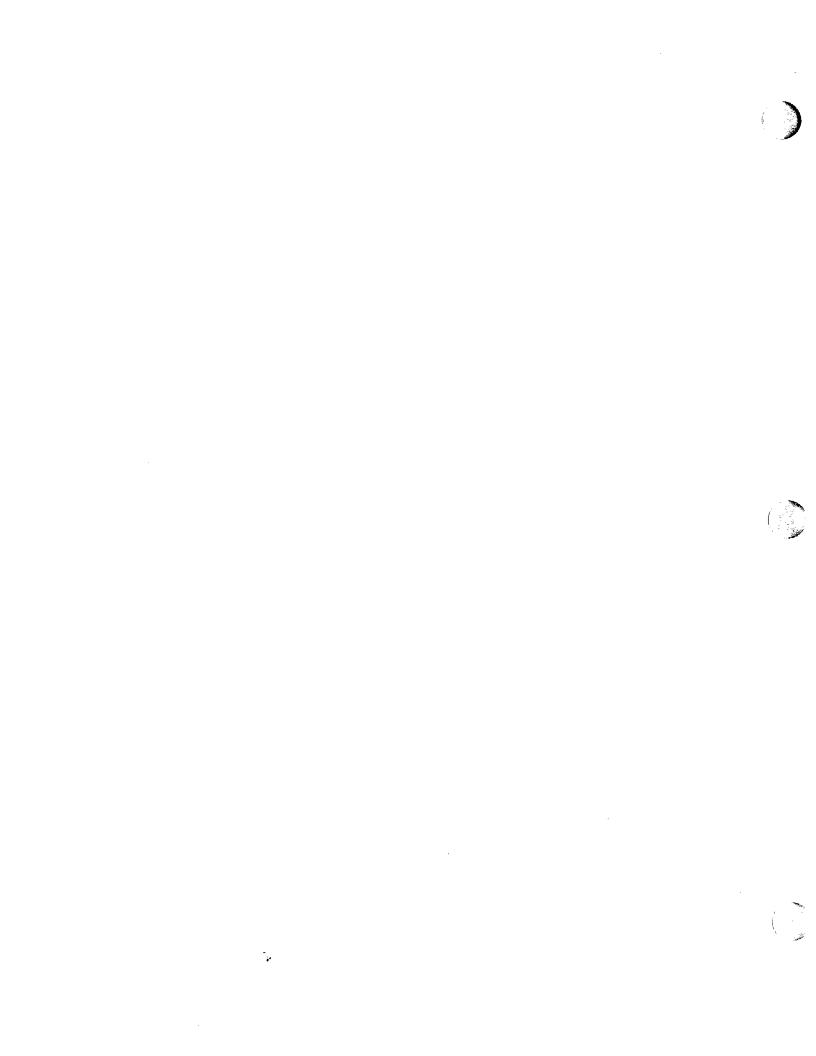
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Site Map Location of Donora Station

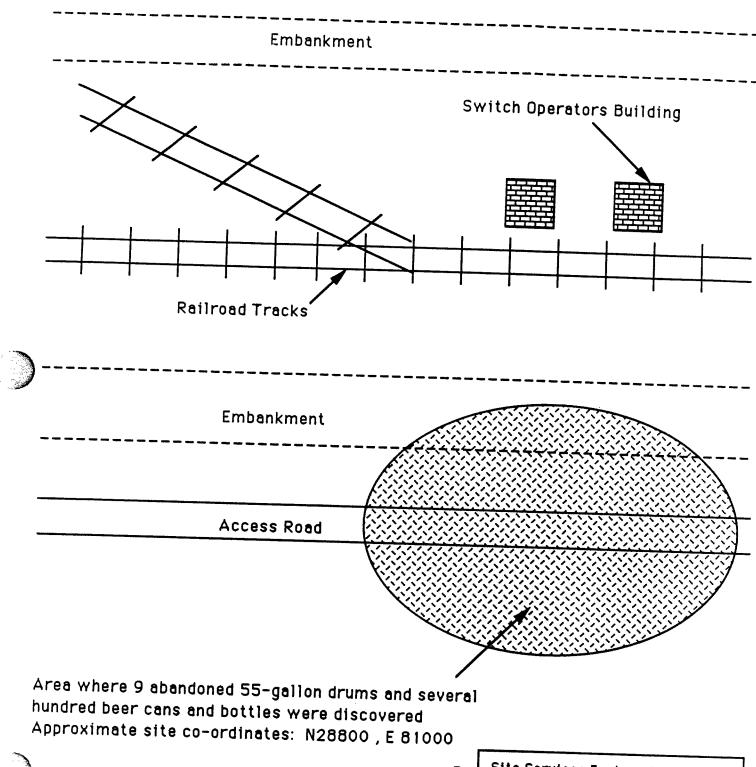


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Attachment #2

PESB 1-46 DONORA STATION - ABANDONED DRUMS



Drawing is not to scale

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Site Services Engineering Environmental & Chemical Systems Engineer: Martin Davis 4-20-92

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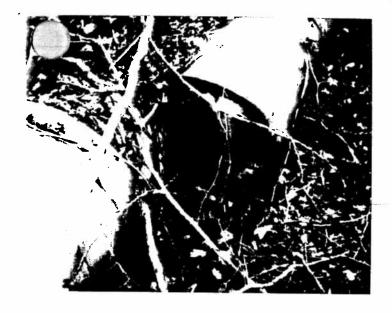


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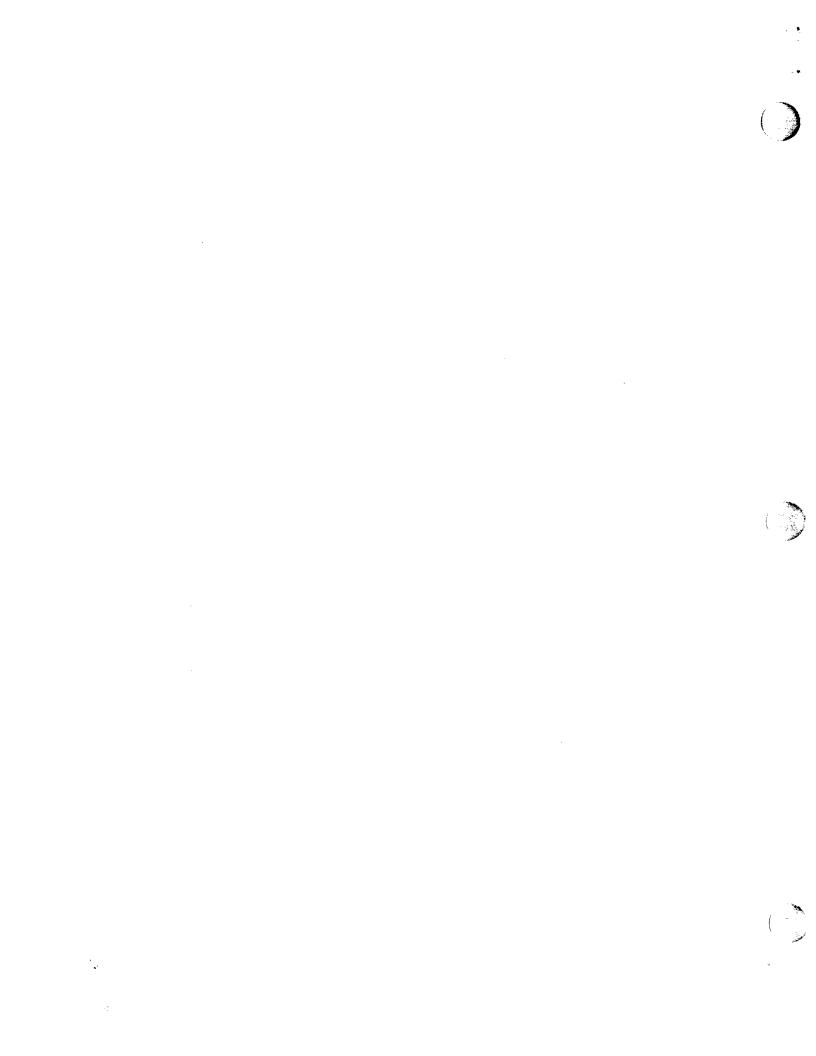






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Key Words: Drums G-Area Samples Kerosene Railroad

SSER-200 APRIL 20, 1992 DONORA STATION ABANDONED DRUMS SAMPLE ANALYSIS (U)

DISTRIBUTION:

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PRD File, 703-A

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April 20, 1992 SSER-200

TO: TRACI BITTLER, 722-A CSWE

FROM: MARTIN DAVIS, 777-19A
Site Services Engineering

SAMPLE ANALYSIS
PROJECT NUMBERS: PESB 2-46
DONORA STATION ABANDONED DRUMS SAMPLE ANALYSIS (U)

Introduction:

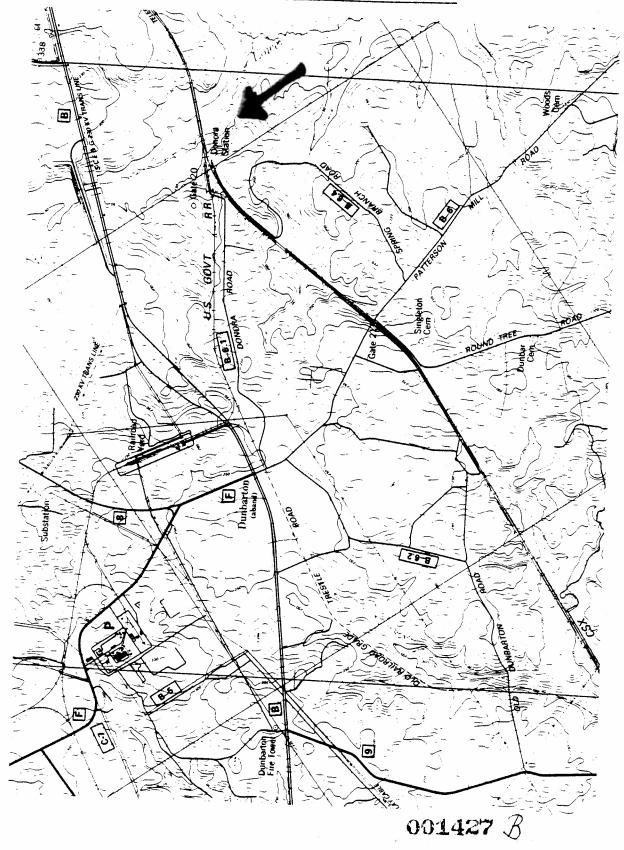
Nine abandoned 55- gallon drums were discovered on March 27, 1992 adjacent to the CSX railroad right-of-way Donora station. This site is located in Barnwell county, East of gate 21 (see attachment #1). The drums were found at the bottom of the railroad embankment in close proximity to the switch station used to transfer trains from the CSX line to the Savannah River Site (see attachment #2). Based on a 1975 calender found inside the operators building, the drums are believed to have been abandoned prior to The drums, along with several hundred empty beer cans, were evidently rolled over the side of the embankment and abandoned in the The drums were removed by CSWE and relocated to 712-G for content analysis and final disposition determination. The drums are believed to contain water and / or kerosene. Samples were collected by the site Waste Analysis Group (WAG) and submitted to SRL for analysis of Radiation, Flash Point and Gas Chromatography / Mass Spectrometry (GC-MS) (fingerprint analysis). An estimate of less then 55 gallons of total liquids is believed to be present in the nine drums.

Sampling Notes:

Samples were collected on 4-2-92; WAG job #152. All nine drums were sampled. Each layer in the drum was sampled and identified by the project number PESB 2-46 along with the drum number and where multiple layers existed, a "T" or "B" for top and bottom layer. Multiple layers were present in drums number: 3, 4, 5, 7 & 8. Leakage from the drums was contained in the over pack drums used. Sample collection required the tipping of several of the drums as the liquid layers present were too shallow to collect; hence, the layer depth for these drums was not determined. Approximate depth of the liquid layers present in the drums are listed below("*" indicates no information on the layer depth):

Drum # 1 2 3T 3B 4T 4B 5T 5B 6 7T 7B 8T 8B 9
Depth Inches: < 2 11.5 * * 3 * 5 * <1 2 <2 1.5 * 3

Site Map Location of Donora Station



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Summary of Results:

SRL has conducted a screening analysis of the liquid samples sent. Two types of liquids were analyzed: an aqueous and an organic. All of the samples were similar in their respective class type. A screening analysis for Kerosene was conducted on the samples. All the organics were very similar in their nature; all were indicative of Kerosene. Further analysis was conducted on one sample at this time and Kerosene was confirmed. The aqueous samples have trace amounts of Kerosene present. All of the samples have flash points in excess of 140 degrees Fahrenheit. Samples are not a radiation hazard. Results are summarized below for Flash Point and Radiation scan (a < sign indicates the lower detection limit of the test was reached):

	Flash Point	Alpha	Beta	Tritium
Drum #	0F	D/Min/mL	D/Min/mL	<u>x10⁻⁵UCi/mL</u>
1	199	<6	4.4	<2.25
2	172	<6	11.6	<2.25
3T	158	<6	13.2	<2.25
3B	201	<6	8.0	<2.25
4T	158	<6	7.2	0.378
4 B	160	<6	<33	<2.25
5T	153	<6	4.8	<2.25
5B	>212	<6	6.8	<2.25
6	174	<6	15.6	<2.25
7T	156	<6	25.2	<2.25
7B	205	<6	15.2	<2.25
8T	158	<6	13.6	<2.25
8B	174	<6	<33	<2.25
9	156	<6	9.6	<2.25

Conclusions:

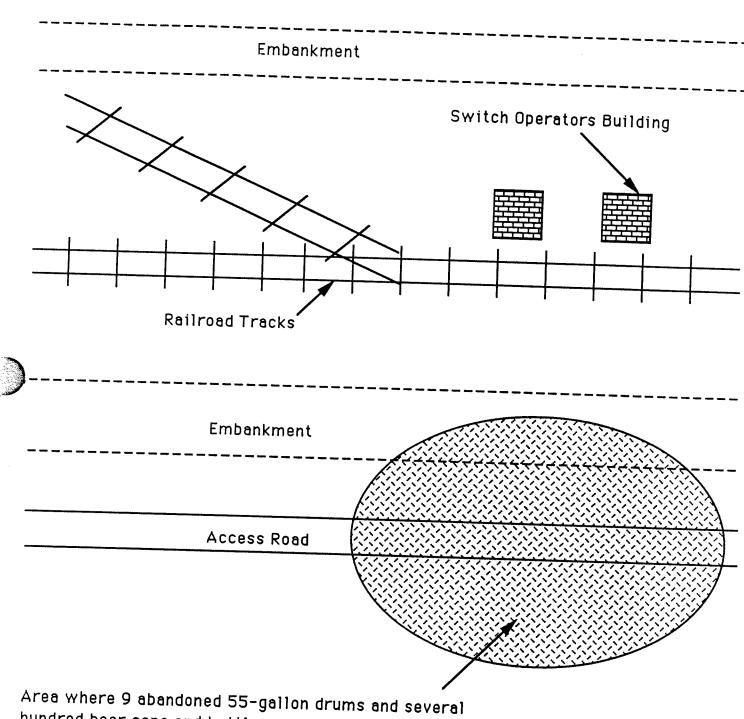
Based on sampling results to date, the organic phase found in the drums is Kerosene. All of the Flash Points reported are >140°F, the material is not an Ignitable EPA hazard. The material is not a radiation hazard. SRL Analytical Development Section is conducting additional analyses to confirm that the contents of the drums is Kerosene. A follow up report will be issued when the analyses are completed.

Attachments:

- 1) Site Map Location of Donora Station
- 2) PESB 1-46, Donora Station Abandoned Drums Sketch
- 3) SRS Waste Analysis Group Chain of Custody forms.
- 4) SRL Radiation and Flash Point Report
- 5) SRTC-ADS-92-0114 Unknown drum bulk characterization

Attachment #2

PESB 1-46 DONORA STATION - ABANDONED DRUMS



Area where 9 abandoned 55-gallon drums and several hundred beer cans and bottles were discovered Approximate site co-ordinates: N28800 , E 81000

Drawing is not to scale

Site Services Engineering Environmental & Chemical Systems Engineer: Martin Davis 4-20-92 PAGE / OF 7

CHAIN-OF-CUSTODY (U)

Westinghouse Savannah River Company, Savannah River Site Analytical Laboratories, Waste Analysis Group

(REV. 0, 1-29-92)

WASTE ANALYSIS GROUP SAVANNAH RIVER SITE Time: REMARKS Sample Destination: SRL Received by: Received by: Received by: (Print) (Print) (Print) (Sign) (Sign) (Sign) 2 Ę Ę Date / Time Date / Time Date / Time マク YON TOTAL HALOGENS TOTAL METALS SAMPLE ANALYSIS REQUESTED TCLP METALS 4JOT cord Validated by: 2 Relinquished by: 4 Retinquished by: (Print) 6 Relinquished by (Print) Hdi 201 **201108** (Print) (E.B.) (Sign) (Sign) Aiken, South Caroline HYD BCHEEN HUTSIOM A Hq **bCB.8** SEQUCIDES HEUBICIDES THICH HEALT Stane **LUSNED** X3T8 (Pring Jane NUMBER OF CONTAINERS Phore: 5-70% Dept. Power Received by: (Print) ٥ 42/92/11500 Received by 0 429 930 O Received by 0 0 0 0 0 ٥ 0 CIRTAN 0 4/2 Rs 930 0 Marks Keys: S = Soli SO = Solid SL = Sludge O = Organic A = Aqueous 0 930 5101 1015/1 9511 cp =14 (Sign) 200 4/2/92/930 5101 Rb/2/1 7/2 py 1015 (Sign) (Print) (Sign) 42921015 TIME 4/2 PG 900 4/2/92 915 COLLECTION 516 RHZ/A 4178 15/0 mm Ę Dete / Time Date / Time hra. 4/2/92 Date / Time DATE TID NUMBER DAVIS 7527 7557 2528 2533 2534 2530 2532 2539 2529 2535 2540 2538 2553 2536 Shipping Container TID # MRTIN 0/-PESB 2-46-5T P38 2-46-57 PESB 2-46-48 PESB 2- 16-4B P332-46-4T PESB 2-46-37 P382-4-4T pess 2-46-3 B PESB 2- 46-3 B PESB2-46-3T SAMPLE I.D. PESB 2-46-2 P38 2-46-2 3 Nettrquished by 5 Relinquished by: (Print) PESB 2461 PESB 2-46-1 Record App Сивротиет: Œ - Colores (Frit (Spg.

Attachment # 3

JOB # 152

Shipping Container TID #

Westinghouse Savannah River Company, Savannah River Site CHAIN-OF-CUSTODY (U)

(REV. 0, 1-29-92)

PAGE 2 OF

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sk Id Number: 300168619 strument Class: PIPPETTE strument Name: DILUTION alyst: WIDENER PR pervisor: HUGHES_MR 724A sk Repetition: 1 Component - Measure - Units Component - Measure - Units SCREEN PREP NOTEBOOK - WSRC-NOTEBOOK - PAGE NUMBER SCREEN PREP NOTEBOOK - WSRC-NOTEBOOK - PAGE NUMBER sk Id Number: 300168620 sk Id Number: 300168620 sk Id Number: HIGHES_MR 724A pervisor: PARKMAN CR pervisor: 1	- PAGE NUMBER	(none) PG 141 (none) (none)	N/A N/A	. 21 1	EMPTY EMPTY	APPROVED APPROVED APPROVED APPROVED
sk Id Number: 300168619 strument Class: PIPPETTE Strument Name: DILUTION alyst: WIDENER PR pervisor: 1 Sk Repetition: 1 Component - Measure - Units Component - Measure - Units MENTS - COMMENT - TEXT SCREEN PREP NOTEBOOK - WSRC-NOTEBOOK - PAGE NUMBER SCREEN PREP NOTEBOOK - WSRC-NOTEBOOK - PAGE NUMBER strument Class: LIQ SCINT strument Class: LIQ SCINT strument Name: TRICARB alyst: PARKMAN CR pervisor: HUGHES MR 724A						
Strument Name: DILUTION alyst: WIDENER PR PR 724A Pervisor: 1 Sk Repetition: 1 Component - Measure - Units SCREEN PREP NOTEBOOK - WSRC-NOTEBOOK - PAGE NUMBER SK Id Number: 300168620 Strument Class: LIQ SCINT Strument Name: TRICARB alyst: PARKMAN CR	Operation:	on: RAD				
alyst: WIDENER PR pervisor: HUGHES_MR 724A sk Repetition: 1 Component - Measure - Units Component - Measure - Units MENTS - COMMENT - TEXT SCREEN PREP NOTEBOOK - WSRC-NOTEBOOK - PAGE NUMBER SCREEN PREP NOTEBOOK - WSRC-NOTEBOOK - PAGE NUMBER sk Id Number: 300168620 strument Class: LIQ SCINT strument Class: LIQ SCINT strument Name: TRICARB alyst: PARKMAN CR pervisor: HUGHES_MR 724A	Due Dat	e: 04-May-1992	83 BS			
SK Repetition: 1 Component - Measure - Units MENTS - COMMENT - TEXT SCREEN PREP NOTEBOOK - WSRC-NOTEBOOK - PAGE NUMBER SK Id Number: 300168620 strument Class: LIQ SCINT strument Name: TRICARB alyst: PARKMAN CR pervisor: HUGHES MR 724A sk Version: 1	Done	: 20				
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MENTS - COMMENT - TEXT SCREEN PREP NOTEBOOK - WSRC-NOTEBOOK - PAGE NUMBER sk Id Number: 300168620 strument Class: LIQ SCINT strument Name: TRICARB alyst: PARKMAN CR pervisor: HUGHES_MR 724A sk Version: 1	- Unit	Result Value	l In	Ins	Status	Condition
Id Number: 300168620 rument Class: LIQ SCINT rument Name: TRICARB yst: PARKMAN CR rvisor: HUGHES MR 724A Repetition: 1 Version: 1	- PAGE		N/A N/A	N/A	COMPLETE	APPROVED APPROVED
rument Class. LLY SCINI rument Name: TRICARB yst: PARKMAN_CR rvisor: HUGHES_MR 724A Repetition: 1 Version: 1	Operation:	on:				
PARKMAN CHUGHES MR rvisor: HUGHES MR Repetition: 1 Version: 1	Method:	RAD SCREEN				
Repetition: Version:	Done	Date: 20-Apr-1992 09:35	20 A 20 E			

ALPHA COUNT - COMMENT 1143
BETA/TRITIUM COUNT - COMMENT 1 TEXT
RAD SCREEN NOTEBOOK - WSRC NE 40-200 - PAGE NUMBER

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					14 14	Task Repetition: Task Version:
		5-8-8-8-8-8-8-8-8-8-8-8-8-8-8-8-8-8-8-8	RAD SCREEN PREP RAD SCREEN 17-Apr-1992 10:58 06-Apr-1992 07:32	Operation: Method: Due Date: Done Date:	300166993 PIPPETTE DILUTION WIDENER PR LEYBA_JD	Task Id Number: Instrument Class: Instrument Name: Analyst: Supervisor:
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						Task Repetition: Task Version:
		10:58 am 04:09 pm	RAD SCREEN RAD SCREEN 17-Apr-1992 10 13-Apr-1992 04	Operation: Method: Due Date: Done Date:	300166992 : LIQ SCINT TRICARB PARKMAN CR LEYBA_JD	Task Id Number: Instrument Class Instrument Name: Analyst: Supervisor:
A COMPLETE A COMPLETE				3 U	- WSRC-NB-90-20	OTAL NOTEBOOK
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					 	Task Repetition: Task Version:
		10:58 am 12:35 pm	FLASH POINT FLASH POINT 17-Apr-1992 13-Apr-1992	Operation: Method: Method: Due Date: Done Date:	300166991 s: (none) : (none) BROWN SB RHINEHART RH	Instrument Class: Instrument Name: Analyst: Supervisor:
: ACTIVE ONLINE (none) DEWEESE BM 03-Apr-1992 10:58 an	Status: on: vel: amp:	Sample Stat Condition: Cond Level: Cond Framp: Time Stamp:	HUGHES MR 724A DAVIS M DAVIS M	Supervisor: Submitter: Requester: Priority:	PESB2-46-3T DAVIS 4/3/92 POWER-LIQ-RAD SCREEN/FLASHPT LIQUID SAMPLE SITE SERVICES	SampleId: e Type: ial Name: ial Type: ialGroup:

Due Date: Method: operation: 24-Apr-1992 01:15 pm

Done Date:

(none)

Task Repetition:

Supervisor: Analyst:

BUCHANAN_BR GAINEY SC HEWLITPAKARD 300167047

Instrument Class:

Number:

Instrument Name:

Task Version:

GC RESULTS -ADP FILE/NOTEBOOK REF - LOCATION Component - Measure -Units (none) Result Value Inl Ind Ins EMPTY Status ONLINE Condition

Sample Id: 200074709 Supervisor: HUGHES MR 724A Sample Status: ACTIVE

Requester: Submitter: Priority:

DAVIS_M

Time Stamp: User Stamp: Cond Level: Condition:

03-Apr-1992 10:58 am

DEWEESE BM (none) ONLINE

MaterialGroup: SITE SERVICES

Task Id Number:

300166994

Material Type: Material Name: Sample Type: SAMPLE LIQUID POWER-LIQ-RAD SCREEN/FLASHPT

User SampleId:

PESB2-46-3B DAVIS 4/3/92

Supervisor: Analyst: Instrument Name: Instrument Class: RHINEHART_RH BROWN SB (none) (none)

> Done Date: Due Date: Method: Operation:

17-Apr-1992 10:58 am 13-Apr-1992 12:35 pm

FLASH POINT

FLASH POINT

Task Version: Task Repetition:

FLASH POINT NOTEBOOK - WSRC-NB-90-204 - PAGE NUMBER FLASH POINT - FLASH POINT - DEGREES FAHRENHEIT Component - Measure - Units 201 33 Result Value N/A N/A N/A N/A Inl Ind N/A COMPLETE N/A COMPLETE Ins Status APPROVED APPROVED Condition

Task Id Number: Instrument Name: Instrument Class: TRICARB LIQ SCINT 300166995 Due Date: Method: Operation: 17-Apr-1992 10:58 am 13-Apr-1992 04:09 pm RAD SCREEN RAD SCREEN

Task Repetition: Task Version:

Supervisor:

LEYBA_JD

PARKMAN CR

Done Date:

Analyst:

BETA/TRITIUM COUNT - COMMENT - 'TEXT RAD SCREEN NOTEBOOK - WSRC-NB-90-200 -ALPHA COUNT - COMMENT - TEXT TRITIUM - COMMENT - TEXT Component - Measure -Units PAGE NUMBER PG 141 8.0D/M/ML <6D/M/ML <2.25E-5UCI/ML Result Value N/A N/A N/A N/A Inl N/A N/A N/A Ind N/A N/A Ins COMPLETE COMPLETE COMPLETE COMPLETE Status Condition APPROVED APPROVED APPROVED APPROVED

Done Date: Due Date: Method:

17-Apr-1992 10:58 am 06-Apr-1992 07:32 am RAD SCREEN

Task Repetition: Version:

Supervisor: Analyst:

WIDENER PR LEYBA_JD

DILUTION

Instrument Name:

Measure - Units

RAD SCREEN PREP NOTEBOOK - WSRC-NOTEBOOK - PAGE NUMBER COMMENTS - COMMENT - TEXT Component -Result Value

(none) NB107 PG 66

N/A N/A Inl Ind N/A COMPLETE Ins EMPTY Status

APPROVED APPROVED Condition

Instrument Name: Instrument Class: Task Id Number: HEWLITPAKARD 300167048

BUCHANAN BR GAINEY_SC

Supervisor: Analyst:

Done Date: Due Date: Method: Operation:

90 24-Apr-1992 01:15 pm (none)

Task Version: Task Repetition:

Component - Measure - Units

GC RESULTS -ADP FILE/NOTEBOOK REF - LOCATION

(none)

Result Value

Inl Ind Ins Status Condition

EMPTY

ONLINE

User SampleId: Sample Id: 200074710 PESB2-46-4T DAVIS 4/3/92

Material Type: Material Name: Sample Type: POWER-LIQ-RAD SCREEN/FLASHPT SAMPLE LIQUID

MaterialGroup: SITE SERVICES

Task Id Number: Instrument Name: Instrument Class: BROWN SB (none) 300166997 (none)

> Priority: Requester: Submitter: Supervisor:

DAVIS M HUGHES MR

Cond Level: Condition: Sample Status: ONLINE ACTIVE

Time Stamp: User Stamp: (none)

03-Apr-1992 10:58 am DEWEESE BM

Task Repetition:

Supervisor: Analyst:

RHINEHART_RH

Due Date: Method: Operation:

FLASH POINT

Done Date:

13-Apr-1992 12:35 17-Apr-1992 FLASH POINT

P B

10:58 am

Task Version:

FLASH POINT NOTEBOOK - WSRC-NB-90-204 - PAGE NUMBER FLASH POINT - FLASH POINT - DEGREES FAHRENHEIT Component - Measure - Units

158 33

N/A N/A

N/A

N/A COMPLETE

APPROVED APPROVED

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Result Value

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Condition

Super sor: andlyst: Instrument Name: Task Id Number: Instrument Class: LEYBA_JD CARNMAN CO CRICARD LIO SCINT 300166998

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13-Apr-1992 04:09 pm 17-Apr-1992 10:58 RAD SCREEN RAD SCREEN til E

ersion: petition:

TRITIUM - COMMENT - TEXT	RAD SCREEN NOTEBOOK - WSRC-NB-90-200 - PAGE NUMBER	BETA/TRITIUM COUNT - COMMENT - TEXT	ALPHA COUNT - COMMENT - TEXT		Component - Measure - Units
3.78E-6UCI/ML	PG 141	7.2D/M/ML	<6D/M/ML		Result Value
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N/A			N/A		Ins
COMPLETE	COMPLETE	COMPLETE	COMPLETE	1	Status
APPROVED	APPROVED	APPROVED	APPROVED		Condition

Supervisor: Analyst: Task Id Number: Instrument Class: Instrument Name: WIDENER PR LEYBA_JD DILUTION PIPPETTE 300166999 Method: Done Date: Due Date: Operation: 17-Apr-1992 10:58 am 06-Apr-1992 07:32 am RAD SCREEN RAD SCREEN PREP

Task Repetition:

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		1	-			
Condition	Inl Ind Ins Status	Ins	Ind		Result Value	Component ~ Measure - Units
						Task Version: 1

Task Id Number: Instrument Class: Instrument Name: 300167049 HEWLITPAKARD Due Date: Method: Operation: 6C 24-Apr-1992 01:15 pm

C	Task Repetition: Task Version:	Analyst: Supervisor:
Component - Measure - Units Result Valu		GAINEY SC BUCHANAN_BR
Re		Done Date:
Result Value		(none)
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GC RESULTS - ADP FILE/NOTEBOOK REF - LOCATION

(none)

EMPTY

ONLINE Condition

Status

Material Type: Sample Type: User SampleId: Sample Id: MaterialGroup: Material Name: Task Id Number: LIQUID
SAMPLE
SITE SERVICES POWER-LIQ-RAD SCREEN/FLASHPT 200074711 PESB2-46-4B DAVIS 4/3/92 300167000 Requester: Priority: Supervisor: Submitter: Operation: HUGHES MR 724A DAVIS M DAVIS M FLASH POINT Time Stamp: User Stamp: Cond Level: Condition: Sample Status: DEWEESE BM 03-Apr-1992 10:58 am ONLINE (none) ACTIVE

Task Repetition: Supervisor: Analyst: Instrument Name: Instrument Class: BROWN SB RHINEHART RH (none) (none) Done Date: Due Date: Method:

Task Version:

FLASH POINT 17-Apr-1992 17-Apr-1992 10:58 am 13-Apr-1992 12:35 pm

TRITIUM - DILUTION - Y/N GC RESULTS - ADP FILE/NOTEBOOK REF -Analyst: Instrument Name: Task Id Number: Instrument Class: Task Version: Task Repetition: Supervisor: RAD SCREEN PREP NOTEBOOK - WSRC-NOTEBOOK - PAGE NUMBER COMMENTS - COMMENT - TEXT Analyst: Instrument Name: Instrument Class: Task Id Number: Task Version: FLASH POINT NOTEBOOK - WSRC-NB-90-204 - PAGE NUMBER Task Repetition: FLASH POINT - FLASH POINT - DEGREES FAHRENHEIT Supervisor: Analyst: Instrument Name: Instrument Class: Task Id Number: Task Repetition: Task Version: Supervisor: Analyst: Instrument Name: Instrument Class: Task Id Number: Component - Measure - Units Component - Measure - Units Component -DILUTION PIPPETTE WIDENER PR 300168621 HUGHES MR 724A WIDENER PR DILUTION FACTOR PIPPETTE 300168613 BUCHANAN_BR GAINEY SC HEWLITPAKARD 60 WIDENER PR LEYBA_JD 300167050 DILUTION PIPPETTE 300167002 Measure - Units LOCATION Done Date: Due Date: Method: Operation: Due Date: Method: (none) Done Date: Operation: (none) Done Date: Due Date: Method: Operation: (none) NB107 PG 66 Done Date: Due Date: 160 33 Method: Operation: Result Value Result Value Result Value Result Value 04-May-1992 09:33 am RAD SCREEN PREP 04-May-1992 09:04 am TRITIUM (none) TRITIUM PREP (none) 24-Apr-1992 01:15 pm 90 17-Apr-1992 10:58 am 06-Apr-1992 07:32 am RAD SCREEN RAD SCREEN PREP Inl Ind Inl N/A N/A Inl N/A A/N A/N 1 Inl Ind Ind Ind N/A Ins Ins N/A COMPLETE Ins N/A COMPLETE Ins N/A COMPLETE EMPTY EMPTY EMPTY Status Status Status Status ONLINE Condition ONLINE Condition Condition APPROVED APPROVED Condition APPROVED APPROVED



Supervisor:

HUGHES MR 724A

(none)



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Supervisor: Analyst: Instrument Name: Instrument Class: Task Id Number: LIQ SCINT HUGHES MR 724A PARKMAN CR TRICARB 300168622 Due Date: Method:

Done Date: Operation: RAD SCREEN 04-Нау-1992 09:33 ам 20-Apr-1992 09:36 am

Task Repetition: Task Version:

TRITIUM - COMMENT - TEXT RAD SCREEN NOTEBOOK - WSRC-NB-90-200 -BETA/TRITIUM COUNT - COMMENT - TEXT ALPHA COUNT - COMMENT - TEXT Component - Measure - Units PAGE NUMBER PG 141 <2.25E-5UCI/ML <33 D/M/ML <6 D/M/ML Result Value A/N A/N N/A N/A N/A N/A Inl Ind N/A N/A COMPLETE Ins N/A COMPLETE N/A COMPLETE COMPLETE Status APPROVED APPROVED APPROVED APPROVED Condition

User SampleId: Sample Id: 200074712
PESB2-46-5T DAVIS 4/3/92
POWER-LIQ-RAD SCREEN/FLASHPT Submitter: Supervisor: DAVIS M HUGHES MR 724A Condition: Sample Status: ONLINE ACTIVE

Priority: Requester:

User Stamp: Time Stamp: Cond Level:

DEWEESE BM 03-Apr-1992 10:58 am

(none)

MaterialGroup: Material Type: SITE SERVICES SAMPLE

Material Name: Sample Type:

LIQUID

Supervisor: Analyst: Task Id Number: Instrument Name: Instrument Class: BROWN SB RHINEHART_RH 300167003 (none) (none) Operation: Done Date: Due Date: Method: FLASH POINT 17-Apr-1992 10:58 am FLASH POINT

Task Version: Task Repetition:

13-Apr-1992 12:35 pm

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Supervisor: Analyst: Instrument Name: Instrument Class: Task Id Number: WIDENER PR LEYBA_JD DILUTION PIPPETTE 300167005 Due Date: Operation: Done Date: Method: RAD SCREEN PREP

17-Apr-1992 10:58 am 06-Apr-1992 07:32 am RAD SCREEN

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		37 a.m.	RAD SCREEN RAD SCREEN 04-May-1992 09:21 20-Apr-1992 09:37	Operation: Method: Due Date: Done Date:	300168618 LIQ SCINT TRICARB PARKHAN CR HUGHES MR 724A	Task Id Number: Instrument Class: Instrument Name: Analyst: Supervisor:
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		р : 21 аш	RAD SCREEN PREP RAD SCREEN 04-May-1992 09:21 (none)	Operation: Method: Due Date: Done Date:	300168617 PIPPETTE DILUTION WIDENER PR HUGHES MR 724A	Task Id Number: Instrument Class: Instrument Name: Analyst: Supervisor:
ONLINE	EMPTY			(none)		
Condition	Ins Status	Inl Ind	Result Value		- Y/N	TRITIUM - DILUTION
						Task Repetition: Task Version:
		09:09 as	TRITIUM PREP TRITIUM 04-May-1992 09 (none)	Operation: Method: Due Date: Done Date:	300168615 PIPPETTE DILUTION FACTOR WIDENER PR HUGHES MR 724A	Task Id Number: Instrument Class: Instrument Name: Analyst: Supervisor:
ONLINE	EMPTY			(none)		
Condition	Ins Status	Inl Ind	Result Value		FILE/NOTEBOOK REF - LOCATION	GC RESULTS - ADP F
						Task Repetition: Task Version:
		01:15 pm	GC GC 24-Apr-1992 0 (none)	Operation: Method: Due Date: Done Date:	300167051 : GC HEWLITPAKARD GAINEY SC BUCHANAN_BR	Task Id Number: Instrument Class: Instrument Name: Analyst: Supervisor:
APPROVED	EMPTY N/A COMPLETE	N/A N/A	66	NB107 PG 6	NOTEBOOK - WSRC-NOTEBOOK - PAGE NUMBER	ካ የ የ
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Component - Measure - Units

Result Value

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TRITIUM - COMMENT - TEXT

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							1 1	Task Repetition: Task Version:
			01:15 pm	GC GC 24-Apr-1992 (none)		Operation: Method: Due Date: Done Date:	300167052 GC HEWLITPAKAKD GAINEY SC BUCHANĀN BK	Task Id Number: Instrument Class: Instrument Name: Analyst: Supervisor:
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ond	s Status	Ind Ins	Inl	Value	Result	† † † † † † † † † † † † † † † † † † †	Component - Measure - Units	C01
							P P	Task Repetition: Task Version:
,			PREP 10:58 am 07:33 am	RAD SCREEN P RAD SCREEN 17-Apr-1992 06-Apr-1992		Operation: Method: Due Date: Done Date:	300167008 PIPPETTE DILUTION WIDENER PR LEYBA_JD	Task Id Number: Instrument Class: Instrument Name: Analyst: Supervisor:
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Condition	s Status	Ind	Inl	Value	Result		Component - Measure - Units	C01
							1	Task Repetition: Task Version:
			10:58 am 12:35 pm	FLASH POINT FLASH POINT 17-Apr-1992 13-Apr-1992		Operation: Method: Due Date: Done Date:	300167006 (none) (none) BROWN_SB RHINEHART_RH	Task Id Number: Instrument Class: Instrument Name: Analyst: Supervisor:
. 10:58 am	ACTIVE ONLINE (none) DEWEESE BM 03-Apr-1992	le Status: .tion: .Level: Stamp: Stamp:	Sample Sta Condition: Cond Level User Stamp Time Stamp	ES MR 724A S M	HUGHES DAVIS MDAVIS MDAVIS M	Supervisor: Submitter: Requester: Priority:	200074713 PESB2-46-5B DAVIS 4/3/92 POWER-LIQ-RAD SCREEN/FLASHPT LIQUID SAMPLE SITE SERVICES	Sample Id: 20 User SampleId: PE Sample Type: PO Material Name: LI Material Type: SA MaterialGroup: SI

RAD SCREEN PREP NOTEBOOK - WSRC-NOTEBOOK - PAGE NUMBER Supervisor: COMMENTS -Analyst: Instrument Name: Instrument Class: Task Id Number: RAD SCREEN NOTEBOOK - WSRC-NB-90-200 - PAGE NUMBER Task Version: Task Repetition: TRITIUM - COMMENT - TEXT BETA/TRITIUM COUNT - COMMENT - TEXT ALPHA COUNT - COMMENT - TEXT Supervisor: Analyst: Instrument Name: Task Id Number: Instrument Class: Task Version: Task Repetition: RAD SCREEN PREP NOTEBOOK - WSRC-NOTEBOOK - PAGE NUMBER COMMENTS -Supervisor: Analyst: Instrument Name: Instrument Class: Task Id Number: Task Version: Task Repetition: Supervisor: Analyst: Instrument Name: Task Id Number: Instrument Class: COMMENT - TEXT COMMENT - TEXT Component - Measure - Units Component - Measure - Units Component - Measure - Units PARKMAN CR LIQ SCINT HUGHES MR 724A TRICARB 300168644 WIDENER PR HUGHES NR 724A DILUTION PIPPETTE 300168643 PARKMAN CR HUGHES MR 724A TRICARB LIQ SCINT 300168642 WIDENER PR HUGHES_MR 724A DILUTION PIPPETTE 300168641 Done Date: Due Date: Method: Operation: (none) Due Date: Done Date: Method: Operation: <2.25E-5UCI/ML 6.8 D/M/ML PG 141 <6 D/M/ML Done Date: Due Date: (none) PG 141 Method: Operation: Due Date: Done Date: Method: Operation: Result Value Result Value Result Value 04-May-1992 09:45 (none) RAD SCREEN RAD SCREEN 04-May-1992 09:45 am RAD SCREEN RAD SCREEN PREP (none) 04-May-1992 09:44 am 20-Apr-1992 09:47 am RAD SCREEN RAD SCREEN 04-May-1992 09:44 am 20-Apr-1992 09:47 am RAD SCREEN RAD SCREEN PREP Inl a m N/AN/A N/A Inl N/A N/A Inl Ind Ind N/A N/A N/A Ind Ins N/AN/AIns N/A COMPLETE Ins EMPTY EMPTY COMPLETE COMPLETE COMPLETE COMPLETE Status EMPTY Status Status ONLINE Condition APPROVED APPROVED APPROVED APPROVED Condition APPROVED APPROVED Condition

Task

Task Repetition:

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FLASH POINT - FLASH POINT - DEGREES FAHRENHEIT FLASH POINT NOTEBOOK - WSRC-NB-90-204 - PAGE NUMBER Material Type: Material Name: Sample Type: User SampleId: MaterialGroup: RAD SCREEN PREP NOTEBOOK - WSRC-NOTEBOOK - PAGE NUMBER COMMENTS - COMMENT - TEXT Task Repetition: Task Version: Task Repetition: Task Version: Task Repetition: Analyst: Task Id Number: Supervisor: Analyst: Instrument Name: Instrument Class: Task Id Number: Supervisor: Instrument Class: Task Id Number: Supervisor: Instrument Name: Instrument Class: Analyst: Instrument Name: SAMPLE SITE SERVICES LIQUID POWER-LIQ-RAD SCREEN/FLASHPT PESB2-46-6 DAVIS 4/3/92 Component - Measure - Units 200074714 Component - Measure - Units Component - Measure - Units RHINEHART RH 90 LEYBA_JD WIDENER PR DILUTION PIPPETTE 300167011 BROWN SB (none 300167009 BUCHANAN BR 300167053 (none) GAINEY SC HEWLITPAKARD Requester: Submitter: Priority: Supervisor: 174 33 Done Date: Method: Operation: NB107 PG Done Date: Due Date: Method: Operation: Done Date: Due Date: Method: Operation: Due Date: (none) 66 DAVIS_M Result Value HUGHES MR Result Value Result Value 17-Apr-1992 10:58 am 06-Apr-1992 07:33 am RAD SCREEN 13-Apr-1992 12:36 pm 17-Apr-1992 FLASH POINT 9C RAD SCREEN PREP (none) 24-Apr-1992 01:15 FLASH POINT 724A 10:58 ал Time Stamp: User Stamp: Cond Level: Condition: Sample Status: Inl N/A N/A N/A N/A Inl Ind N/A N/A Inl Ind ď Ind Ins N/A COMPLETE Ins N/A COMPLETE N/A COMPLETE Ins 03-Apr-1992 10:58 am DEWEESE BM (none) ONLINE ACTIVE EMPTY Status Status Status APPROVED APPROVED Condition APPROVED APPROVED Condition Condition

Supervisor: Task Repetition: Analyst: Instrument Class: Task Id Number: Instrument Name: WIDENER PR HUGHES MR 724A DILUTION PIPPETTE 300168647 Done Date: Operation: Due Date: Method: 04-May-1992 09:53 am (none) RAD SCREEN RAD SCREEN PREP

Task Version:

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Supervisor: Analyst: Task Id Number: Instrument Name: Instrument Class: TRICARB LIQ SCINT 300168648 Due Date: Method: Operation: (none)

PARKMAN CR HUGHES MR 724A Done Date: 04-May-1992 09:53 am 20-Apr-1992 10:00 am RAD SCREEN RAD SCREEN

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Submitter:

DAVIS M

HUGHES MR

Supervisor:

Material Type: Material Name: User SampleId: Sample Type: Sample Id: PESB2-46-7T DAVIS 4/3/92 LIQUID POWER-LIQ-RAD SCREEN/FLASHPT

MaterialGroup: Supervisor: Instrument Class: Task Id Number: Analyst: Instrument Name: SITE SERVICES SAMPLE RHINEHART_RH BROWN SB (none) (none) 300167012 Requester: Priority:

Method: Due Date: Operation: FLASH POINT FLASH POINT

Time Stamp: User Stamp: Cond Level: Condition: Sample Status:

03-Apr-1992 10:58 am

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Done Date: 13-Apr-1992 12:36 pm 17-Apr-1992 10:58 am

Task Version: Task Repetition:

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Supervisor: Analyst: Instrument Class: Instrument Name: Ta d Number: LEYBA_JD WIDENER PR DILUTION PIPPETTE 300167014

> Done Date: Due Date: Method: operation:

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17-Apr-1992 10:58 am 06-Apr-1992 07:33 am

Task Version: Task Repetition:

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WSRC-NOTEBOOK - PAGE NUMBER (none)

NB107 PG 66

N/A N/A N/A

Analyst: Task Id Number: Instrument Name: Instrument Class: GAINEY SC BUCHANAN_BR 00 HEWLITPAKARD 300167054 Done Date: Due Date: Method: Operation:

(none) 24-Apr-1992 01:15 pm

90

Task Version: Task Repetition: Supervisor:

GC RESULTS - ADP FILE/NOTEBOOK REF -Component - Measure - Units LOCATION (none) Result Value Inl Ind Ins EMPTY Status

> ONLINE Condition

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WIDENER PR HUGHES NR 724A

Done Date: Method: Operation:

Due Date:

04-May-1992 10:03 am 20-Apr-1992 10:05 am

RAD SCREEN RAD SCREEN PREP

Supervisor:

Task Repetition: Task Version:

Component -Measure -Units Result Value Inl Ind Ins EMPTY Status APPROVED Condition

PG 141

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Instrument Class: Task Id Number: Instrument Name: TRICARB LIQ SCINT 300168650 RAD SCREEN PREP NOTEBOOK - WSRC-NOTEBOOK - PAGE NUMBER

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Supervisor: Analyst:

PARKMAN CR HUGHES MR 724A

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Due Date: Operation:

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MaterialGroup: Material Type: Sample Type: Material Name: User SampleId: Sample Id: Task Id Number: Instrument Class: SITE SERVICES SAMPLE POWER-LIQ-RAD SCREEN/FLASHPT PESB2-46-78 DAVIS 4/3/92 TIQUID 200074716 300167015 (none) Priority: Requester: Submitter: Supervisor: DAVIS M DAVIS M HUGHES_MR 724A Time Stamp: User Stamp: Cond Level: Condition: Sample Status: 03-Apr-1992 10:58 am DEWEESE_BM ONLINE ACTIVE (none)

BROWN SB RHINEHART RH Due Date: Method: Done Date: Operation: 17-Apr-1992 10:58 am 13-Apr-1992 12:36 pm FLASH POINT FLASH POINT

Task Version: Task Repetition:

Supervisor: Analyst:

Instrument Name:

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FLASH POINT NOTEBOOK - WSRC-NB-90-204 - PAGE NUMBER FLASH POINT - FLASH POINT - DEGREES FAHRENHEIT Task Id Number: Component - Measure - Units 300167016 205 33 Result Value N/A Inl N/A N/A N/A Ind N/A COMPLETE Ins COMPLETE Status APPROVED APPROVED Condition

Supervisor: Analyst: Instrument Name: Instrument Class: LEYBA JD PARKMAN_CR TRICARB LIQ SCINT Done Date: Due Date: Method:

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> Operation: 17-Apr-1992 10:58 am 16-Apr-1992 02:10 pm RAD SCREEN RAD SCREEN

TRITIUM - COMMENT - TEXT RAD SCREEN NOTEBOOK - WSRC-NB-90-200 - PAGE NUMBER BETA/TRITIUM COUNT - COMMENT - TEXT ALPHA COUNT - COMMENT - TEXT Instrument Class: Analyst: Instrument Name: Task Id Number: Component - Measure - Units DILUTION PIPPETTE 300167017 Due Date: Method: Operation: <2.25E-5 UCI/ML (LLD) 15.2 D/M/ML PG 141 <6 D/M/ML (LLD)</pre> Result Value 17-Apr-1992 10:58 am 06-Apr-1992 07:33 am RAD SCREEN PREP RAD SCREEN N/A N/A N/A N/A N/A N/A Inl Ind N/A N/A N/A N/A Ins COMPLETE COMPLETE COMPLETE COMPLETE Status APPROVED APPROVED APPROVED APPROVED Condition

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Supervisor: Analyst: Instrument Name: Instrument Class; Id Number: BUCHANAN_BR HEWLITPAKARD GAINEY_SC 300167055

> Operation: Done Date: Due Date: Method:

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24-Apr-1992 01:15 pm (none)

Task Repetition: Version:

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GC RESULTS -ADP FILE/NOTEBOOK REF - LOCATION

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MaterialGroup: Sample Type: User SampleId: Material Type: Material Name: Sample Id: Task Repetition: Supervisor: Analyst: Instrument Name: Instrument Class: Task Id Number: LIQUID SAMPLE SITE SERVICES POWER-LIQ-RAD SCREEN/FLASHPT 200074717 PESB2-46-8T DAVIS 4/3/92 RHINEHART_RH BROWN SB e uou 300167018 (none) Submitter: Priority: Requester: Supervisor: Done Date: Due Date: Method: Operation: DAVIS M DAVIS M HUGHES MR 724A 13-Apr-1992 12:36 FLASH POINT 17-Apr-1992 FLASH POINT 10:58 ав Time Stamp: User Stamp: Cond Level: Condition: Sample Status: ď 03-Apr-1992 10:58 am DEWEESE_BM ACTIVE (none) ONLINE

Task Version:

FLASH POINT - FLASH POINT - DEGREES FAHRENHEIT FLASH POINT NOTEBOOK - WSRC-NB-90-204 - PAGE NUMBER Component - Measure - Units 158 33 Result Value N/A N/A N/A N/A Inl Ind N/A Ins COMPLETE COMPLETE Status APPROVED APPROVED Condition

Task Id Number: Instrument Class: 300167019

TRICARB LIQ SCINT

Supervisor: Analyst: Instrument Name: LEYBA_JD

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Done Date: Due Date: Method: Operation:

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Task Version: Task Repetition:

Supervisor: Analyst:

Instrument Name:

Component - Measure - Units

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Supervisor: Task Id Number: Analyst: Instrument Name: Instrument Class: GAINEY_SC HEWLITPAKARD 300167056

BUCHANAN BR Done Date: Due Date: Method: Operation:

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APPROVED APPROVED Condition

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24-Apr-1992 01:15 pm

Task Task Version: Repetition:

Component - Measure - Units

GC RESULTS - ADP FILE/NOTEBOOK REF - LOCATION (none) Result Value Inl Ind Ins EMPTY Status ONLINE Condition

Sample Type: User SampleId: PESB2-46-8B DAVIS 4/3/92 POWER-LIQ-RAD SCREEN/FLASHPT

Supervisor: Submitter:

Priority: Requester:

DAVIS M

HUGHES_MR 724A

MaterialGroup: Material Type: Material Name: SAMPLE SITE SERVICES LIQUID

Supervisor: Analyst: Instrument Name: Instrument Class: Task Id Number: RHINEHART RH BROWN SB (none) 300167021 (none)

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Time Stamp: User Stamp: Cond Level: Condition: Sample Status:

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Supervisor: Analyst: Instrument Class: Task Id Number: Instrument Name: WIDENER PR LEYBA JD DILUTION PIPPETTE 300167023

> Due Date: Method: Done Date:

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Supervisor: Instrument Name: GAINEY_SC BUCHANAN_BR HEWLITPAKARD

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Instrument Class: Task Id Number:

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Task Version: Task Repetition:

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Result Value

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Status

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ONLINE Condition

POWER-LIQ-RAD SCREEN/FLASHPT Priority: Supervisor:

User SampleId: Sample Type:

Sample Id:

200074719 PESB2-46-9 DAVIS 4/3/92

MaterialGroup: Material Type: Material Name:

SITE SERVICES

LIQUID

Task Id Number:

Instrument Name: Instrument Class:

> Requester: Submitter:

DAVIS M HUGHES MR

Cond Level: Condition: Sample Status:

Time Stamp: User Stamp:

> DEWEESE BM ONLINE ACTIVE

(none)

03-Apr-1992 10:58 am

17-Apr-1992 10:58 am 13-Apr-1992 12:36 pm FLASH POINT FLASH POINT

Method: Done Date: Due Date: Operation:

Task Repetition:

Supervisor. Analyst:

BROWN SB

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Component - Measure - Units

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Result Value

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Operation: Done Date: Due Date: Method: FLASH POINT - FLASH POINT - DEGREES FAHRENHEIT FLASH POINT NOTEBOOK - WSRC-NB-90-204 - PAGE NUMBER PARKMAN CR LEYBA_JD 300167025 LIQ SCINT TRICARB Instrument Class: Instrument Name: Task Id Number:

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RAD SCREEN 17-Apr-1992 10:58 am 16-Apr-1992 02:00 pm

Task Repetition: Task Version:

Supervisor:

Analyst

Component - Measure - Units

BETA/TRITIUM COUNT - COMMENT - TEXT RAD SCREEN NOTEBOOK - WSRC-NB-90-200

TRITIUM - COMMENT - TEXT

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Done Date: Operation: Due Date: Method: WIDENER PR LEYBA JD 300167026 PIPPETTE DILUTION Instrument Class: Instrument Name: Task Id Number: Supervisor: Analyst:

17-Apr-1992 10:58 am 06-Apr-1992 07:33 am

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24-Apr-1992 01:15 pm (none) S Operation: Done Date: Due Date: Method:

> BUCHANAN BR Supervisor:

HEWLITPAKARD

300167058

Instrument Class: Instrument Name:

Analyst:

Task Id Number:

GAINEY SC

Task Repetition: Task Version:

Component - Measure - Units

Result Value (none) GC RESULTS - ADP FILE/NOTEBOOK REF - LOCATION

Status Ins Inl Ind

Condition ONLINE EMPTY

Savannah River Technology Center Analytical Development Section

SRTC-ADS-92-0114

April 16, 1992

To: Martin Davis, 704-K8F

From: John Young, 773-A, 5-3565

Subject: Unknown drum - bulk characterization

We have completed the characterization of the material that was submitted under the NORA project. The sample was confirmed to be kerosine by the following bulk constituents:

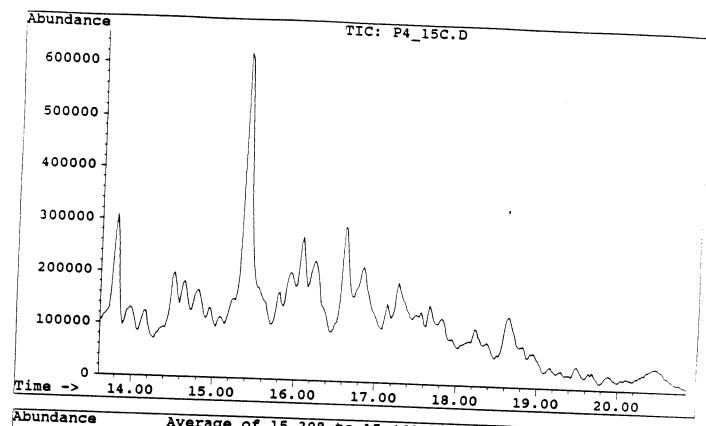
component	estimated value
aliphatic hydrocarbons	17 wt%
aromatic hydrocarbons	58 wt%
cycloparaffins	13 wt%
boiling point range	150°- 250°C
weighted average boiling p	ooint 216°C

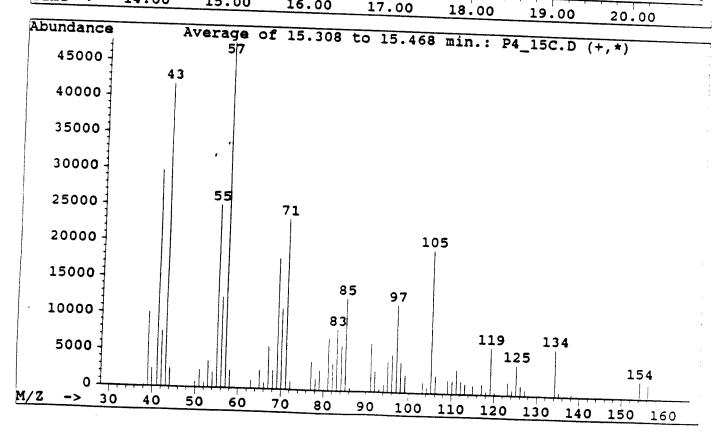
Analyses were performed using Gas Chromatography - Mass Spectrometry (GC-MS). The sample was diluted in methanol/water, and delivered to the GC-MS via a purge and trap sample concentrator. Separation was accomplished with a $30m \times 0.53mm$ VOCOL capillary column with 3 μm film thickness. A glass jet separator was inline prior to the inlet into the mass spectrometer.

The boiling point range and average boiling point of the material was determined by peak weighted assessment of the chromatographic data using established boiling point / retention time correlations.

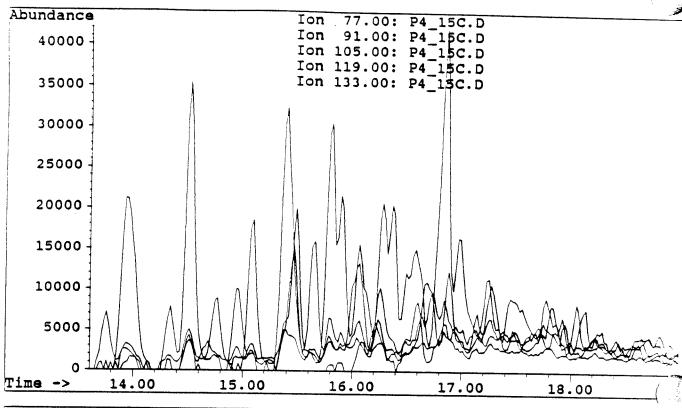
All GC-MS work was performed on a single representative sample from the batch of samples. Confirmatory analysis of all samples is being performed using conventional gas chromatography, and will be suitable to demonstrate that the material in the drums is nearly identical. These data will be provided to you when completed.

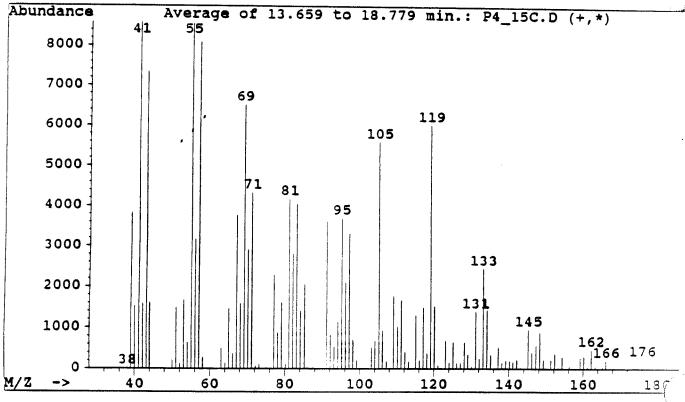
Chromatographic data is attached to illustrate the characteristic components' mass spectral ions.





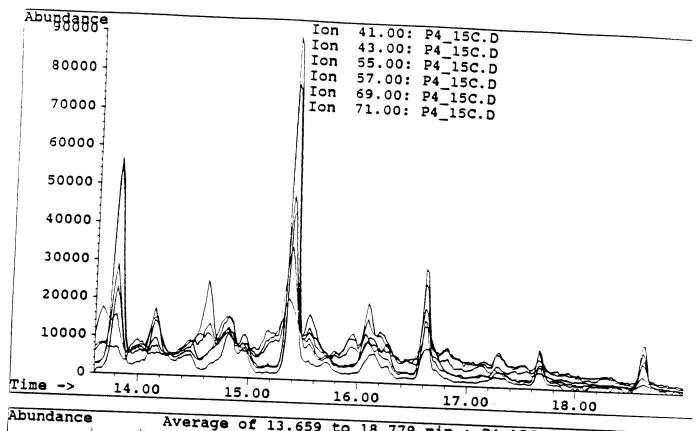
Characteristic ions of aromatic hydrocarbons in unknown NORA site material (BP=150 to 250°C range)

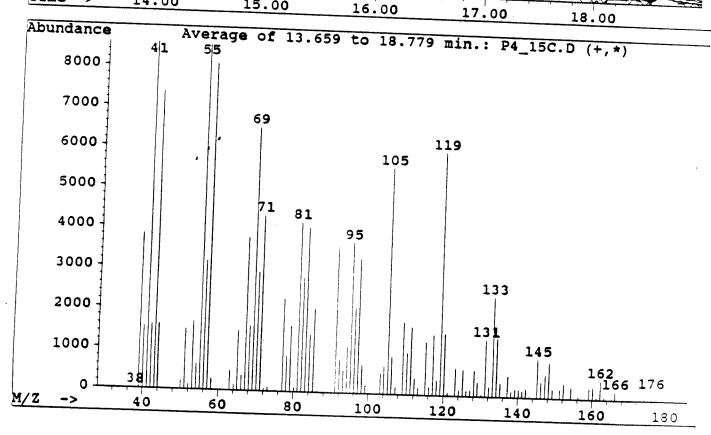




Characteristic ions of aliphatic hydrocarbons in unknown NORA site material (BP=150 to 250°C range)

Append





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Key Words: DRUMS G-AREA SAMPLES KEROSENE RAILROAD

SSER-207
MAY 15, 1992
DONORA STATION ABANDONED KEROSENE DRUMS SOIL SAMPLE ANALYSIS (U)

DISTRIBUTION:

T.H. HICKS, 703-46A
C.A. AMACHER, 742-A
H.S. WILLIS, 777-10A
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J. KIRBY, 706-G
M.A. DAVIS, 777-19A
File 777-10A
PRD File 703-A

MAY 15, 1992 SSER-207

TRACI BITTLER, 722-A TO:

Central Services Works Engineering

FROM: MARTIN DAVIS, 777-19A

Site Services Engineering

SAMPLE ANALYSIS

PROJECT NUMBERS: PESB 2-45

DONORA STATION ABANDONED KEROSENE DRUMS SOIL SAMPLE ANALYSIS (U)

Introduction:

Nine abandoned 55- gallon drums were discovered on March 27, 1992 adjacent to the CSX railroad right-of-way Donora station. This site is located in Barnwell county, East of gate 21 (see attachment #1). The drums were found at the bottom of the railroad embankment in close proximity to the switch station used to transfer trains from the CSX line to the Savannah River Site (see attachment #2). The drums are believed to have been abandoned prior to 1975. The drums, along with several hundred empty beer cans, were evidently rolled over the side of the embankment and abandoned in the woods. The drums had small amounts of liquid present at the time of discovery; analysis by SRL determined that the liquids present were Water and Kerosene. The drums were believed to be close to empty at the time of abandonment. An estimate of less then 55 gallons of total liquids was believed to be present in the nine drums removed. As potential for leakage into the environment from the drums existed, analysis of the underlying soil was conducted.

Sampling Notes:

Samples were collected on 4-20-92. Two samples were composited from depths of 0-6 inches from depressions left in the soil from the abandoned drums. The samples were collected from the lowest point in the depressions, increasing the probability of detecting Kerosene contamination present in the soil. Sample "A" was composited from depressions left on CSX property; sample "B" was composited from depressions found on SRS Both samples were analyzed for TPH (Total Petroleum Hydrocarbons) and BTEX (Benzene, Toluene, Ethyl Benzene, and Xylenes). Only two samples were to be collected for preliminary investigation as per request from EPD (Environmental Protection Department, Westinghouse). See attachment #3 for photographs taken of the site. Soil samples collected were rich in organic matter. Field observations from the site and the soil collected did not indicate the presence of Kerosene or petroleum odors.

MAY 15, 1992 SSER-207

Page 2 of 2 SSD-SUD-926245

Summary of Results:

Listed below is a summary of the analysis performed by Weston Analytics for BTEX and TPH determination of two soil samples collected from the Donora site (see attachment #4). Results are reported in mg/kg (equivalent to parts per million).

Analysis	Sample "A"	Sample "B"
Total Petroleum Hydrocarbons:	66.8	57.9
Benzene:	<0.0024	< 0.0034
Ethyl Benzene:	<0.0024	< 0.0034
Toluene:	0.0018*	< 0.0034
Xylene (total):	<0.0024	0.0010*

^{*} Present but below the detection limit.

Conclusions:

Low concentrations of Total Petroleum Hydrocarbons were detected at this site. No concentrations in significant quantity of BTEX constituents were detected. Based on these results the site is relatively free of Kerosene contamination.

Attachments:

- 1) Savannah River Site, Site Map Location of Donora Station
- 2) Project PESB 2-45 Donora Station Sample Site Location Diagram
- 3) Photographs of Donora Station Abandoned Drum Site
- 4) Weston Analytics report of analysis, RFW# 9204S627, 5/12/1992.

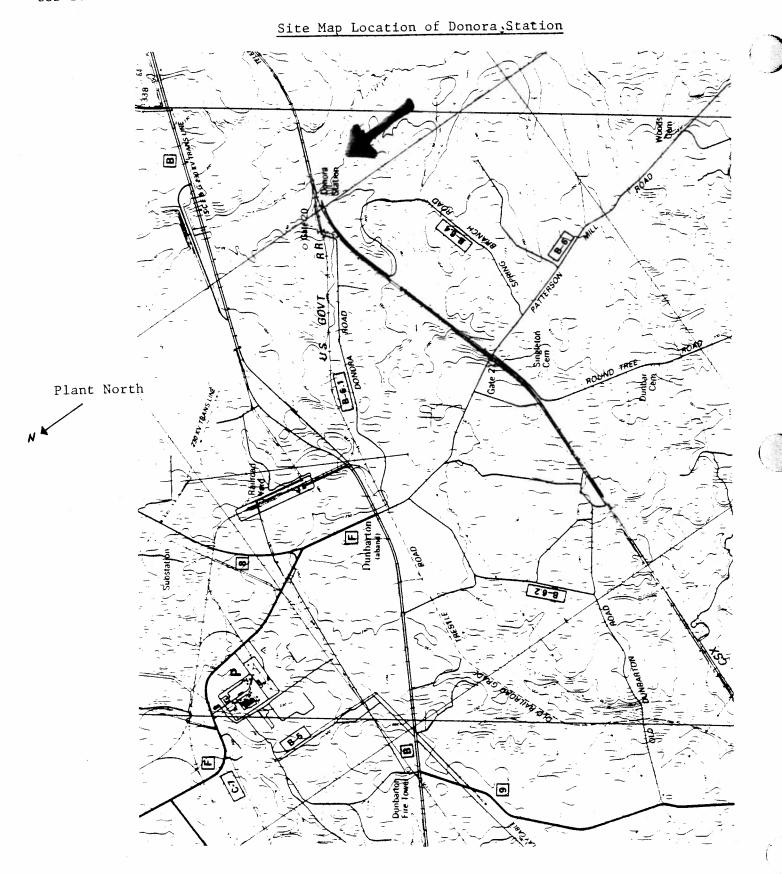
References:

- 1) SSER-200, <u>Donora Station Abandoned Drums Sample Analysis</u>. Martin Davis, 4/20/1992
- 2) SSER-201, <u>Donora Station Abandoned Drums Final Sample Analysis</u>. Martin Davis, 4/27/1992

JOOKET NO. **001427** B

SUP \$1890008989

Attachment #1



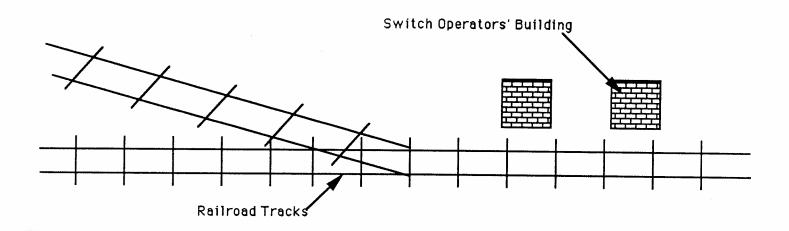
Attachment #2

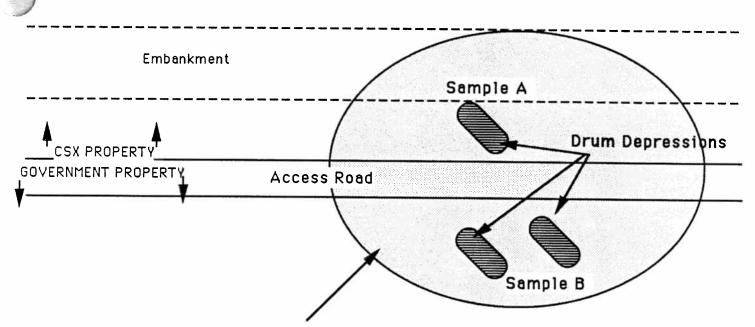
Page 1 of 1

PROJECT PESB 2-45 DONORA STATION SAMPLE SITE LOCATION DIAGRAM

GOVERNMENT PROPERTY

Embankment





Abandoned drum site; approximate site co-ordinates: N28800 , E 81000

001427 ${\mathcal B}$

TEC

Site Services Engineering
Environmental & Chemical Systems
Engineer: Martin Davis
5-14-92

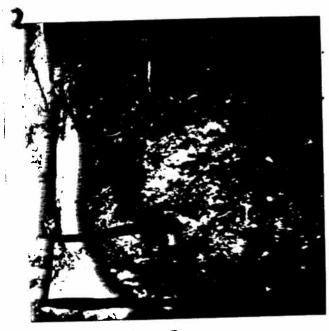
Drawing is not to scale

Photographs of Donora Station Abandoned Drum Site

Site A: CSX Railroad Property. Drum Depression Outlined:



PESB 2-45 4-6-92



PESB 2-45 4-6-12

Photographs of Donora Station Abandoned Drum Site

Site B: Government Property. Drum Depression Outlined:



PE28 2-45 4-6-42



PESB 2-45 4-6-12



001427

TEC

9526 2-48 4-6-16

\$1890008989

Attachment #4



Donora Station Kerosene Drums

Laboratory Report For

Ms. Rhonda Huffines WSRC P.O. Box 616 Aiken, SC 29808

12 May 1992

By

Roy F. Weston, Inc.
212 Frank West Circle, Suite A
Stockton, CA 95206
(209) 983-1340

RFW#: 9204S627

Approved By:

Date: 5-14-92

Ronda L. Huffines Site Services Engineering

DATA QUALIFIERS

- B Indicates the compound was found in the blank and the sample.
- E Concentrations exceed calibration range of the instrument.
- I Indicates Interference.
- J Indicates an estimated value for either a TIC or an analyte that meets the identification criteria but the result is less than the specified reporting limit.
- T Indicates the compound was found in the TCLP extraction blank and the sample.
- u Indicates an inorganic compound was analyzed for but not detected.
- U Indicates an organic compound was analyzed for but not detected.
- BS Indicates matrix analyses were conducted on reagent grade water.
- BSD- Blank Spike Duplicate
- BDL- Below Detection Limit
- D Indicates that surrogate/matrix spike recoveries were not obtained because the extract had to be diluted for analysis.
- DL Indicates a secondary dilution
- DF Dilution factor
- LCS- Laboratory Control Sample
- MB Method Blank
- MS Matrix Spike
- MSD- Matrix Spike Duplicate
- NA Not Applicable
- X Result is by calculation
- NS Not Spiked
- *Result was outside advisory limits.

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NOTES:

Solid, sediment and sludge results are reported on a dry weight basis except when analyzed for Landfill disposal parameters (such as incineration or Illinois Green Sheet parameters). All other mg/kg results are reported on an "as received" basis.

Reporting limits are detection limits adjusted for sample size used, dilutions made, and in the case of dry weight results, the moisture content of the sample.





ROY F. WESTON, INC. STOCKTON ANALYTICAL LABORATORY ANALYTICAL CASE NARRATIVE

Client: WRSC 2-45 RFW#: 9204S627

Test: SW8020-PURGEABLE AROMATICS

- 1. This narrative covers the analysis of two (2) soil samples in accordance with protocols based on SW-846, method 8020.
- 2. The analytical holding times for these analyses were met.
- 3. Continuing calibration criteria was met for this analysis, with the exception of Ethylbenzene (-15.3%) and p-Xylene (-16%) in the first standard.
- 4. The method blank associated with this samples did not contain any target analytes at, or above, the reporting limits.
- 5. All surrogate recoveries were outside Laboratory QC limits. Poor surrogate recoveries were due to matrix effects.
- 6. The blank spike recoveries were within Laboratory QC limits.
- 7. Retention times were within QC tolerance limits.
- 8. Confirmation by second column analysis was performed.

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Roy F. Weston, Inc. - Stockton Laboratory 8020 ANALYTICAL DATA PACKAGE FOR WSRC PESB 2-45

DATE RECEIVED: 0	RF			RFW LOT # :9	FW LOT # :9204S627	
CLIENT ID	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
PESB-2-45-A PESB-2-45-B	001 002		92SVI118 92SVI118	04/06/92 04/06/92	N/A N/A	04/27/92 04/27/92
LAB QC:						
BLK BLK	MB1 MB1 BS	S S	92SVI118 92SVI118	1	N/A N/A	04/27/92 04/27/92

Ethylbenzene. Xylene (total Benzene_ Surrogate Toluene Sample RFW Batch Number: 9204S627 Information aaa-Trifluorotoluene Bromofluorobenzene Cust ID: PESB-2-45-A Matrix: D.F.: Units: RFW#: Client: WSRC PESB 2-45 001 SOIL 1.00 ug/Kg Roy F. Weston, Inc. - Stockton Laborator Purgeable Aromatics by GC, Method 8020 2.4 2.4 1.8 2.4 NS * * % S PESB-2-45-B 002 SOIL 1.00 ug/Kg 56 * %% Stockton Laboratory 92SVI118-MB1 BLK SOIL ug/Kg 2.0 2.0 2.0 2.0 85 N 1.00 Work Order: 0345-38-01-0000 ____ % % 92SVI118-MB1 BLK BS 7I0S 98 95 2.0 85 Z ug/Kg 1.00 ⊂%%% Report Date: 05/07/92 11:14 TEC 0008 \$18 98

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not requested. NS= Not spiked. %= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of Advisory limits. NA= Not Applicable. *= Outside of Advisory limits.

ROY F. WESTON, INC. STOCKTON ANALYTICAL LABORATORY ANALYTICAL CASE NARRATIVE

Client:

WSRC PESB 2-45

RFW#:

9204S627

Inorganics Case Narrative

Analysis completed in accordance with method 418.1. 1.

T. L. Hammonds

Unit Leader



Roy F. Weston, Inc. - Stockton Laboratory INORGANIC ANALYTICAL DATA PACKAGE FOR WSRC PESB 2-45

DATE RECEIVED: 04/21	1/92				RFW LOT # :9	204S627
CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
PESB-2-45-A						
% SOLIDS PETROLEUM HYDROCARBO PETROLEUM HYDROCARBO PETROLEUM HYDROCARBO	001 001 001 MS 001 MSD	\$ \$ \$ \$	92STS123 92SIR219 92SIR219 92SIR219	04/06/92 04/06/92 04/06/92 04/06/92	04/23/92 04/22/92 04/22/92 04/22/92	04/23/92 04/23/92 04/23/92 04/23/92
PESB-2-45-B						
% SOLIDS PETROLEUM HYDROCARBO	002 002	S S	92STS123 92SIR219	04/06/92 04/06/92	04/23/92 04/22/92	04/23/92 04/23/92
LAB QC:						
% SOLIDS PETROLEUM HYDROCARBO PETROLEUM HYDROCARBO PETROLEUM HYDROCARBO	MB1 LC1 L LC2 L MB1	W S S S	92STS123 92SIR219 92SIR219 92SIR219	N/A N/A N/A N/A	04/23/92 04/22/92 04/22/92 04/22/92	04/23/92 04/23/92 04/23/92 04/23/92

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ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 04/28/92

CLIENT: WSRC PESB 2-45 WORK ORDER: 0345-38-01-0000

WESTON BATCH #: 9204S627

MOKK OKDE	K: 0345-36-01-0000				REPORTING	
SAMPLE ====== -001	SITE ID =========== PESB-2-45-A	ANALYTE ====================================	RESULT ======= 84.8 66.8	UNITS ===== % MG/KG	LIMIT ======= 0.10 11.8	
-002	PESB-2-45-B	% Solids Petroleum Hydrocarbons	58.9 57.9	% MG/KG	0.10 17.0	

ROY F. WESTON INC.

INORGANICS METHOD BLANK DATA SUMMARY PAGE 04/28/92

CLIENT: WSRC PESB 2-45 WORK ORDER: 0345-38-01-0000

WESTON BATCH #: 9204S627

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT
BLANK10	92STS123-MB1	% Solids	0.10 u	%	0.10
BLANK10	92SIR219-MB1	Petroleum Hydrocarbons	10.0 u	MG/KG	10.0

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TEC \$1890008989

WESTON BATCH #: 9204S627

ROY F. WESTON INC.

INORGANICS ACCURACY REPORT 04/28/92

CLIENT: WSRC PESB 2-45

WORK ORDER: 0345-38-01-0000

WORK ORDER	R: 0345-38-01-0000		SPIKED	INITIAL	SPIKED	~~F.O.O.V
SAMPLE	SITE ID	ANALYTE	SAMPLE	RESULT	AMOUNT	%RECOV ======
-001	PESB-2-45-A	Petroleum Hydrocarbons Petroleum Hydrocarbons	533 537	66.8 66.8	472 472	98.8 99.6

ROY F. WESTON INC.

INORGANICS DUPLICATE SPIKE REPORT 04/28/92

CLIENT: WSRC PESB 2-45 WORK ORDER: 0345-38-01-0000

WESTON BATCH #: 9204S627

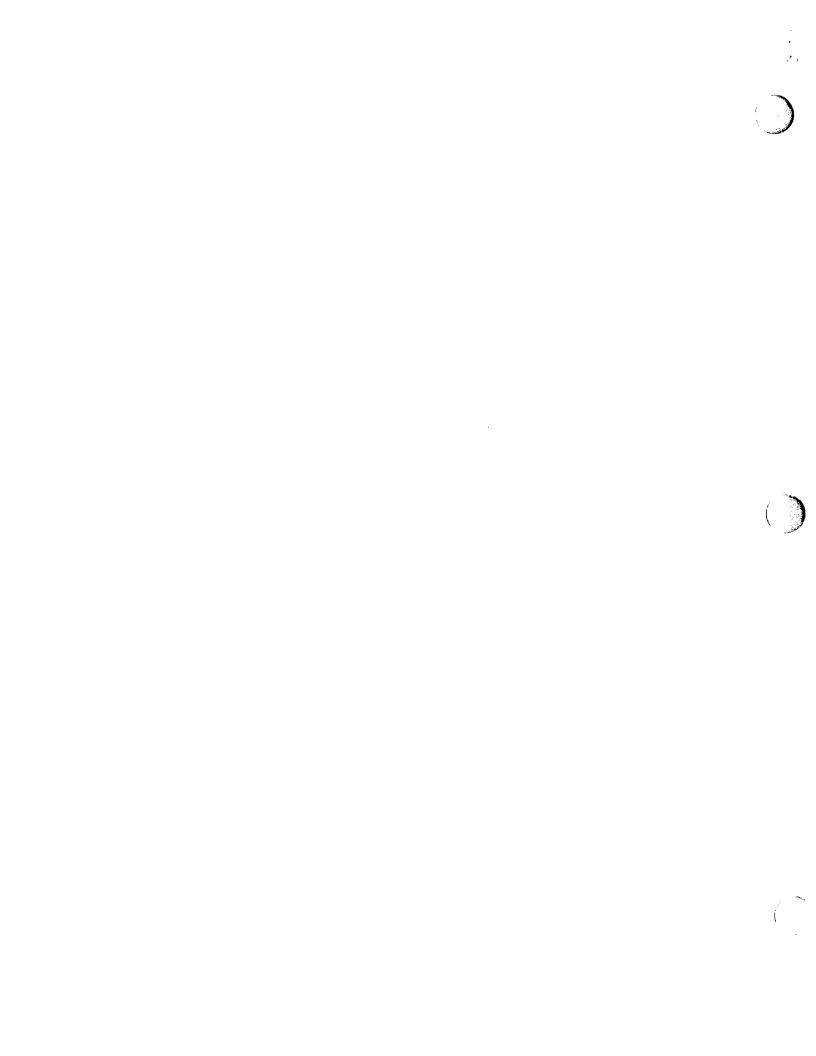
SAMPLE	CITE ID		SPIKE#1	l SPIKE#2	2
SAMPLE	SITE ID	ANALYTE	%RECOV	%RECOV	%DIFF
				=====	=====
-001		Petroleum Hydrocarbons		99.6	0.80
LCS20	92SIR219-LC2	Petroleum Hydrocarbons	99.2	99.0	0.20

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ROY F. WESTON INC. INORGANICS LABORATORY CONTROL STANDARDS REPORT 04/28/92

SAMPLE ===== LCS10	SITE ID ====================================	ANALYTE ====================================	SPIKED SAMPLE ===== 397	SPIKED AMOUNT ===== 400	UNITS ===== MG/KG	%RECOV ===== 99.2
LCS20	92SIR219-LC2	Petroleum Hydrocarbons	396	400	MG/KG	99.0















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